

## Two introduced psyllid species (Hemiptera, Psylloidea) in Brazilian eucalypt plantations

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Psylloids or jumping plant-lice are tiny sap-sucking insects resembling minute cicadas. World-wide the group comprises about 2500 species most of which develop on woody dicotyledoneous plants (BURCKHARDT, 1994). The tribe Spondyliaspidini (Psyllidae) is almost exclusively restricted to Australia, and most of the constituent species develop on *Eucalyptus* and other Myrtaceae. Within the tribe, *Ctenarytaina* Ferris and Klyver has the widest natural distribution stretching from India and Southeast Asia to Australia, New Zealand and some Pacific islands (BURCKHARDT, 1998). Some *Ctenarytaina* species have been introduced into other countries together with their eucalypt hosts (TAYLOR, 1997). The blue gum psyllid, *Ctenarytaina eucalypti* (Maskell), infests young foliage of several *Eucalyptus* species. It naturally occurs in Southeast Australia and Tasmania, and was introduced into New Zealand, Papua New Guinea, Sri Lanka, South Africa, the Canary Islands, California and Europe (France, Italy, Portugal, Spain, Madeira, the UK and Germany). The damage is described by CADAHIA (1980), in Spain, as follows: the sucking can distort or dry buds and young leaves, or may produce a lot of new buds distorting the whole plant. The loss of plant sap may reduce considerably plant growth. In addition the excretion of large amounts of wax and honeydew soils the plants and promotes fungal growth. *Ctenarytaina spatulata* Taylor, another species from Southeast Australia, was also found outside its natural range (New Zealand in 1990, California in 1991 and Uruguay in 1994; TAYLOR (1997). It was collected on *E. viminalis*, *E. leucoxyton*, *E. mannifera maculosa*, *E. pauciflora*, *E. longifolia*, *E. saligna*, *E. viminalis*, *E. rodwayi*, *E. ovata*, *E. nitida*, *E. camaldulensis*, *E. grandis* and *Eucalyptus* sp. (TAYLOR, 1997). To investigate *Eucalyptus grandis* die-back in the North of Paraná State, Brazil, a series of experiments has been carried out in the field, in green houses and in the laboratory, since 1992. MASCHIO et. al. (1997), investigated this problem and suggested that the die-back represents the final symptom of plant stress caused by adverse climatic conditions, inappropriate soil and nutrition, pests and diseases. In 1994, collections were made for identifying the insects associated with this problem. The species with the highest population density was *Ctenarytaina spatulata* Taylor. It was collected on *E. grandis*, *E. saligna* and *E. dunnii* (IEDE et al., 1996). In a survey, the damage made by psyllids to *Eucalyptus grandis*

was assessed in several places in Brazil. Two psyllid species were found. *Ctenarytaina spatulata* Taylor was collected on *Eucalyptus grandis* in the States of Paraná and São Paulo. The population fluctuations of this species have been followed since 01/10/97 in an experimental *Eucalyptus grandis* plantation in Paraná State, by counting eggs and larvae in 2 buds of 10 plants each, once a week. These observations show that all stages (eggs, larvae and adults) of this species occur all year round, but the population declines with abundant rain. In the cold and dry seasons, on the other hand, the population increased. The methodology was very efficient to monitor the immature stages but not the adults. *E. grandis* was infected by *C. spatulata* in a green house essay, where it was shown to reduce growth, distort and discolour the leaves, and help fungal growth but, without additional stress, does not produce eucalypt die-back. The second species found in *Eucalyptus* plantations is *Blastopsylla occidentalis* Taylor. This is the first report of the species from Brazil, Goiás State (Central Brazil), where the dry season is longer than in Southern Brazil, with over four months without rain. This species was collected on *Eucalyptus urophylla* and on hybrids of *E. urophylla* and *E. grandis*. *Blastopsylla* includes 9 species from Australia and New Guinea (TAYLOR, 1985). The species feed on the growing tips of *Eucalyptus*, *Callistemon*, *Daviesia*, *Leptospermum* and *Melaleuca* species. *Blastopsylla occidentalis* originates from Australia (Queensland, Western Australia, Southern Australia, New South Wales) and was introduced into New Zealand, California and Mexico (HODKINSON, 1991). In Brazil, both psyllid species have been recorded from regions where the eucalypt plants show terminal distortion, excessive sprouting, leaf discoloration and die-back.

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